## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments regarding the new amendments to the claims have been fully considered but are not persuasive.

**Applicant argues, that Kubosawa does not teach or suggest adjusting a user interface to an active or inactive state, or more particularly, adjusting on the basis of a state of a user interface component.**

In response to applicant's argument, the examiner respectfully disagrees. In the Kubosawa reference the entire keypad can be interpreted as the user interface while the specific key to be pressed to cause handover can be interpreted as the user interface component. Therefore, clearly when a user presses the specific key (i.e. the user interface component) the user interface (i.e. the key pad) is adjusted to an active state, and when the user is no longer pressing the button the user interface (i.e. key pad) is adjusted to an inactive state. Therefore, the user interface is adjusted between an active and inactive state on the basis of the state of a user interface component (i.e. the key pad is adjusted between active and inactive when a specific key is pressed).

**Applicant further argues, Kubosawa would no teach or suggest enabling application of the handover algorithm in response to detecting the state of the user interface component to change from inactive to active state.**

In response to applicant's argument, the examiner respectfully disagrees. Kubosawa teaches that handover would take place when the specific button is pressed (par. 55). Therefore, when the specific button (i.e. the user interface component) is

pressed, it clearly goes from an inactive state (i.e. not being pressed) to an active state (i.e. being pressed), and the handover would be enabled in response to this state change. The examiner notes that Kubosawa teaches enabling actual handover and does not specifically disclose enabling the handover algorithm. However, this idea was shown in the combination in which Halonen and Lee were shown to teach the idea of enabling and preventing the handover algorithm. Therefore, the combination clearly teaches the argued limitation and would have been obvious to one of ordinary skill in the art at the time of invention.

**Applicant further argues that there is no suggestion of preventing a handover algorithm based on a user interface state adjusted on the basis of a state of a user interface component.**

In response to applicant's argument, the examiner respectfully disagrees. As explained above, Kubosawa teaches allowing or preventing handover based on a user interface (i.e. key pad) state adjusted on the basis of the state of a user interface component (i.e. a specific key of the key pad) since he teaches that the user pressing the button to allow handover would cause the handover to take place, and not pressing the button would cause the handover to not take place (see figure 2 and par. 55). However, Kubosawa teaches enabling actual handover and does not specifically disclose enabling or preventing the handover algorithm. However, this idea was shown in the combination in which Halonen and Lee were shown to teach the idea of enabling and preventing the handover algorithm. Halonen clearly teaches in page 9 at lines 19-21 the idea of preventing the handover algorithm. Therefore, the combination clearly

teaches the argued limitation and would have been obvious to one of ordinary skill in the art at the time of invention.

**Applicant further argues, with respect to independent claim 35, that none of the cited references teach or suggest initiating the handover algorithm in response to detecting the state of the screen saver functionality to change from application of the screen saver functionality to the non-application of the screen saver functionality.**

In response to applicant's argument, the examiner respectfully disagrees. As explained above, Kubosawa teaches allowing or preventing handover based on a user interface state adjusted between active and inactive (i.e. pressing or not pressing a key) since he teaches that the user pressing the button to allow handover would cause the handover to take place, and not pressing the button would cause the handover to not take place (see figure 2 and par. 55). However, the examiner noted that Kubosawa taught that the handover was enabled or prevented based on detecting the state of a key pad and a specific key, and not based on as screen saver functionality changing from application to non application of the screen saver. McKinnon clearly teaches in par. 18 that the device monitors the status of a screen saver to determine when the user is present and using the device, or when the user is not present and the device is inactive. He explains that when the screen saver status is inactive, the user is deemed present (i.e. actively using the device), and when the screen saver is active, the user is deemed not present (i.e. not actively using the device). This idea clearly reads on detecting the state of the screen saver functionality to change from application of the

screen saver functionality to the non-application of the screen saver functionality (i.e. when the screen saver is active and the user is not actively using the device and when the screen saver is in active and the user is actively using the device. Therefore, the combination of Kubosawa and McKinnon do in fact teach the argued limitation and the combination would have been obvious to one of ordinary skill in the art at the time of invention.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 31 and 33 recites the limitation "the screen saver" in claims 1 and 9, from which claims 31 and 33 depend, there is no mention of a screen saver. There is insufficient antecedent basis for this limitation in these claims.

### *Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 3, 8, 9, 13, 19, 21, 23-25, 27, 28, 36, 38, 39, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kubosawa (US 2002/0183062) in view of Halonen (WO 99/45733) in further view of Lee et al. (US 2003/0153312).

**Regarding claims 1, 9, and 21.** Kubosawa teaches a mobile terminal, method, and computer readable medium comprising: (abstract and figures 1-2)

a processor (figure 1 item 50) configured to check a state of a user interface component (figure 2 item S9, further par. 55 which explains that the input keys are checked for an input of the user, thus the state of a user interface component is checked since the "user interface component" can be interpreted as a specific key used to tell the device to handover), wherein a user interface of a mobile terminal is adjustable in an inactive state or in an active state on the basis of the state of the user interface component (see figure 2 items S8, S9, and S10, specifically where it judges the instruction of the user and if there is no input it does not handover, and if there is input at step S9, it executes the handover. The idea of judging the instruction of the user and detecting an input reads on the interface component being active and inactive, i.e. no input to the user interface component is inactive since the user is not actively selecting the key of the interface, while an input is clearly active since the user is pushing the key. The entire key pad is interpreted as the "user interface" and the specific key that tells the device to handover is the "user interface component"), the user interface not being actively used by a user during the inactive state, (figure 2 step S9, the user interface, keys 62 in figure 1, are checked for an input from the user. See par. 55 and 75 which explains how the controller judges whether the user has depressed one of the input keys 62 or not, and thus if a key is input the interface is in an actively used state, and if no input key is pressed then the input keys are clearly set in an inactive state. The idea of setting the user interface to an inactive state is inherent in

view of the user interface being input keys 62. For example, when a key is depressed the controller knows the key is actively used and will perform some action based on that key being pressed, and thus the keys are in an active state. However, when no key is pressed, or after a single key is pressed and then no more keys are again pressed, the user interface component is set as inactive since the controller is not registering any presses of the keys 62, and thus the keys are not actively being used.) and

if the current state of the user interface is inactive (figure 2 step S9, further par. 75, i.e. the user did not input any instruction using the input keys 62), the processor is configured to prevent, on the basis of the checking, application of a handover (figure 2, step S9, handover is prevented if the user did not use the input keys 62, thus if the user interface component is inactive, the handover is prevented, further see par. 75), configured to select one of at least two available channels to be used for a connection from the terminal. (par. 30, i.e. the controller controls handover between two communication systems, and thus selects one of at least two available channels)

The examiner notes that Kubosawa teaches initiating the actual handover and not simply a handover algorithm, however, as provided below, Halonen teaches the idea of preventing and initiating a handover algorithm for the reasons set forth below.

Although Kubosawa teaches that if there is no input from the user (figure 2, item S9, no input, i.e. the keypad has no input, thus clearly reading on a user interface component being inactive) the device will not handover, he does not specifically disclose that the handover algorithm will be prevented.

Halonen teaches a handover method and system (title and abstract). He clearly

teaches the idea of preventing a handover algorithm (rather than just preventing an actual handover as in Kubosawa) on page 9 at lines 19-21. He clearly states that the hand over algorithm can be stopped, thus "preventing" the handover algorithm. Further see page 3 lines 17-19 which states that an advantage of the method is that it is not necessary to keep checking for a possible hand over in situations, which can clearly be interpreted as the hand over algorithm being "prevented" since the system will not keep checking for possible hand over. This idea, of preventing the hand over algorithm, when combined with the ideas as in Kubosawa (i.e. if a user interface is inactive the device will not handover), would allow for one of ordinary skill in the art to clearly see that preventing the entire handover algorithm, rather than just preventing the hand over itself, based on the user interface being inactive would have been obvious at the time of invention. As explained below, it would allow for a system that will not have to unnecessarily keep checking for possible hand over.

Therefore it would have been obvious for one of ordinary skill in the art at the time of invention to utilize the teachings of Halonen with the teachings as in Kubosawa. The motivation for doing so would have been to create a system and method that is not necessary to keep checking for possible handovers in certain situations. (Halonen page 3 lines 17-20).

However, they do not specifically disclose initiating the handover algorithm in response to detecting the state of the user interface to change from the inactive to the active state.

Lee teaches a device and system to detect movement of users and prepare a

handoff process (title and abstract). He teaches in figure 2 and par. 16 the idea of initiating the handover algorithm in response to detecting the state of the user interface to change from the inactive to the active state, when he explains figure 2 step 201. The user will power on the wireless communication unit, thus clearly having a user interface component transition from an inactive state to an active state. Then, as seen in figure 2 and explained in par. 16, the handover algorithm (figure 2, the steps following the power on step is the handover algorithm) is initiated in response to the device being turned on, and thus reading on in response to a user interface changing from an inactive state to an active state.

Therefore it would have been obvious for one of ordinary skill in the art at the time of invention to utilize the teachings of Lee with the teachings as in the combination of Kubosawa and Halonen. The motivation for doing so would have been to allow for saving power consumption. (Lee par. 6).

**Regarding claims 3 and 13.** Kubosawa further teaches the idea of deciding to perform a handover if the mobile station is near another coverage area in par. 38.

**Regarding claims 8 and 19.** Kubosawa further teaches wherein the handover algorithm determines a change between channels of different network technologies. (par. 37, the handover is performed between different communication systems, and a change in channel would thus be inherent.)

**Regarding claim 24.** Kubosawa further teaches that checking the state further comprises checking the state of a mechanical user interface component in figure 1 item 62, which are input keys, (i.e. mechanical components).

**Regarding claims 23, 25, and 27.** Kubosawa further teaches the idea of performing measurements on the current state if the user interface is active. (see figure 2 item S4)

**Regarding claim 28.** Kubosawa further teaches wherein the apparatus is the mobile terminal with a user interface in figure 1.

**Regarding claims 36 and 39.** Kubosawa further teaches wherein the state of the user interface component is checked automatically in response to detecting a change in the state of the user interface component. (figure 2 item S9, further par. 55 which explains that the input keys are checked for an input of the user, thus the state of a user interface component is checked automatically in response to detecting a change in state of the user interface component, i.e. when a key is pressed by the user, the device will receive a signal indicating which key has been pressed, and thus reads on automatically in response to detecting a change in state of the user interface component, checking the state of the user interface component because the device will check which key has been pressed immediately in response to a key being pressed, which clearly reads on the limitations as claimed)

**Regarding claims 38 and 41.** Kubosawa further teaches wherein the mobile terminal comprises a specific button to set the user interface to active or inactive state (figure 2 item S9, further par. 55, i.e. handover button), the latest activity of the button affecting the state of the user interface component and the handover algorithm applicability. (figure 2 item S9 and par. 55, i.e. the pressing of the handover button affects the state of the user interface component (i.e. the key pad is affected since the

button is pressed and a signal from the button press is received), and this pressing of the button affects the handover algorithm (i.e. a press of the button causes handover, and no press of the button causes no handover).

6. Claims 5, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kubosawa in view of Halonen, Lee, and further in view of Claxton (US 6178388).

**Regarding claims 5, 15, and 16.** Kubosawa, Halonen, and Lee teach the limitations of the previous claims.

However, they do not distinctly disclose wherein the terminal comprises a body portion and a lid which is connected to the body portion and can be moved with respect to the body portion, and wherein the state of the lid in relation to the body portion is checked.

Claxton teaches the idea that flip phones (phones with 1st and 2nd portions) are well known in the art and that when the flip phone is closed (with key pads covered) they are inactive, and when opened they are active. (column 1 lines 48-59) (i.e. which clearly reads on "wherein the state of the lid in relation to the body portion is checked", and checking the position of the 1st portion in relation to the 2nd).

Therefore it would have been obvious for one of ordinary skill in the art at the time of invention to utilize the teachings of Claxton into the teachings of Kubosawa, Halonen, Lee. The motivation for doing so would have been to allow for the mobile device as in Kubosawa to be of the flip phone type, since it is a well-known and highly popular style mobile phone.

7. Claims 6 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kubosawa, in view of Halonen, Lee, and further in view of Cowsky, III et al. (US 2004/0204123).

**Regarding claims 6 and 17.** Kubosawa, Halonen, Lee teach the limitations of the previous claims.

However, they do not distinctly disclose wherein the terminal comprises a keypad and a keypad locking functionality for locking the keypad, whereby the state of the keypad locking is checked.

Cowsky teaches a flip phone with keypad in figure 1, he further teaches the idea of a locking functionality for locking the keypad in par. 2 to allow for making the keys inactive.

Therefore it would have been obvious for one of ordinary skill in the art at the time of invention to utilize the locking function as in Cowsky with the teachings of Kubosawa, Halonen, Lee. The motivation for doing so would have been to allow for locking the keypads and avoiding inadvertent keystrokes (Cowsky par. 1-2)

8. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kubosawa, Halonen, Lee, and further in view of Harris et al. (US 6871074).

**Regarding claim 20.** Kubosawa, Halonen, Lee teach the limitations of the previous claims. Kubosawa further teaches the idea of the terminal comprising of a timer in figure 2, see item S3.

However they do not distinctly disclose wherein the terminal comprises a timer configured to determine the state of the user interface as inactive after a predetermined time period has elapsed after the latest user activity.

Harris teaches it is well known for a mobile terminal using a timer to transition the mobile to an off/inactive state upon the given time being elapsed (clearly shown in the abstract).

Therefore it would have been obvious for one of ordinary skill in the art at the time of invention to utilize the teachings of Harris with the teachings Kubosawa, Halonen, Lee. The motivation for doing so would have been to increase system performance (abstract).

9. Claims 31, 33, 35, 37, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kubosawa in view of Halonen in further view of Lee as applied to claims 1 and 9 above, and further in view of McKinnon et al. (US 2003/0135624).

**Regarding claim 35.** Kubosawa teaches a mobile terminal, method, and computer readable medium comprising: (abstract and figures 1-2)

a processor (figure 1 item 50) configured to check a state of a user interface component (figure 2 item S9, further par. 55 which explains that the input keys are checked for an input of the user, thus the state of a user interface component is checked since the "user interface component" can be interpreted as a specific key used to tell the device to handover), wherein a user interface of a mobile terminal is adjustable in an inactive state or in an active state on the basis of the state of the user

interface component (see figure 2 items S8, S9, and S10, specifically where it judges the instruction of the user and if there is no input it does not handover, and if there is input at step S9, it executes the handover. The idea of judging the instruction of the user and detecting an input reads on the interface component being active and inactive, i.e. no input to the user interface component is inactive since the user is not actively selecting the key of the interface, while an input is clearly active since the user is pushing the key. The entire key pad is interpreted as the "user interface" and the specific key that tells the device to handover is the "user interface component"), the user interface not being actively used by a user during the inactive state, (figure 2 step S9, the user interface, keys 62 in figure 1, are checked for an input from the user. See par. 55 and 75 which explains how the controller judges whether the user has depressed one of the input keys 62 or not, and thus if a key is input the interface is in an actively used state, and if no input key is pressed then the input keys are clearly set in an inactive state. The idea of setting the user interface to an inactive state is inherent in view of the user interface being input keys 62. For example, when a key is depressed the controller knows the key is actively used and will perform some action based on that key being pressed, and thus the keys are in an active state. However, when no key is pressed, or after a single key is pressed and then no more keys are again pressed, the user interface component is set as inactive since the controller is not registering any presses of the keys 62, and thus the keys are not actively being used.) and

if the current state of the user interface is inactive (figure 2 step S9, further par. 75, i.e. the user did not input any instruction using the input keys 62), the processor is

configured to prevent, on the basis of the checking, application of a handover (figure 2, step S9, handover is prevented if the user did not use the input keys 62, thus if the user interface component is inactive, the handover is prevented, further see par. 75), configured to select one of at least two available channels to be used for a connection from the terminal. (par. 30, i.e. the controller controls handover between two communication systems, and thus selects one of at least two available channels)

The examiner notes that Kubosawa teaches initiating the actual handover and not simply a handover algorithm, however, as provided below, Halonen teaches the idea of preventing and initiating a handover algorithm for the reasons set forth below.

Although Kubosawa teaches that if there is no input from the user (figure 2, item S9, no input, i.e. the keypad has no input, thus clearly reading on a user interface component being inactive) the device will not handover, he does not specifically disclose that the handover algorithm will be prevented.

Halonen teaches a handover method and system (title and abstract). He clearly teaches the idea of preventing a handover algorithm (rather than just preventing an actual handover as in Kubosawa) on page 9 at lines 19-21. He clearly states that the hand over algorithm can be stopped, thus "preventing" the handover algorithm. Further see page 3 lines 17-19 which states that an advantage of the method is that it is not necessary to keep checking for a possible hand over in situations, which can clearly be interpreted as the hand over algorithm being "prevented" since the system will not keep checking for possible hand over. This idea, of preventing the hand over algorithm, when combined with the ideas as in Kubosawa (i.e. if a user interface is inactive the device

will not handover), would allow for one of ordinary skill in the art to clearly see that preventing the entire handover algorithm, rather than just preventing the hand over itself, based on the user interface being inactive would have been obvious at the time of invention. As explained below, it would allow for a system that will not have to unnecessarily keep checking for possible hand over.

Therefore it would have been obvious for one of ordinary skill in the art at the time of invention to utilize the teachings of Halonen with the teachings as in Kubosawa. The motivation for doing so would have been to create a system and method that is not necessary to keep checking for possible handovers in certain situations. (Halonen page 3 lines 17-20).

However, they do not specifically disclose initiating the handover algorithm in response to detecting the state of the user interface to change from the inactive to the active state.

Lee teaches a device and system to detect movement of users and prepare a handoff process (title and abstract). He teaches in figure 2 and par. 16 the idea of initiating the handover algorithm in response to detecting the state of the user interface to change from the inactive to the active state, when he explains figure 2 step 201. The user will power on the wireless communication unit, thus clearly having a user interface component transition from an inactive state to an active state. Then, as seen in figure 2 and explained in par. 16, the handover algorithm (figure 2, the steps following the power on step is the handover algorithm) is initiated in response to the device being turned on, and thus reading on in response to a user interface changing from an inactive state to

an active state.

Therefore it would have been obvious for one of ordinary skill in the art at the time of invention to utilize the teachings of Lee with the teachings as in the combination of Kubosawa and Halonen. The motivation for doing so would have been to allow for saving power consumption. (Lee par. 6).

However, they do not specifically disclose wherein the terminal comprises a screen saver functionality, the state of which is detected, wherein the state of the user interface component is inactive when the screen saver functionality is applied and the state of the user interface component is active when the screen saver functionality is not applied. Kubosawa simply teaches that the user interface component are keys that the user can press, and that the change from inactive to active can be read as the pressing of a key.

McKinnon teaches a method and system of dynamically obtaining the presence of a user based on state information (title and abstract). He teaches in par. 18 that the device monitors the status of a screen saver to determine when the user is present and using the device, or when the user is not present and the device is inactive. He explains that when the screen saver status is inactive, the user is deemed present (i.e. actively using the device), and when the screen saver is active, the user is deemed not present (i.e. not actively using the device). This idea clearly reads on wherein the user interface component is screen saver (i.e. par. 18, screen saver) and the state of the user interface component is inactive when the screen saver functionality is applied (par. 18, i.e. user not present) and the state of the user interface component is active when the

screen saver functionality is not applied (par. 18, i.e. user present).

Therefore it would have been obvious for one of ordinary skill in the art at the time of invention to utilize the teachings of McKinnon with the teachings as in the combination of Kubosawa, Halonen, and Lee. The motivation for doing so would have been to allow for controlling behavior of the communication system based on detecting presence of the user. (McKinnon par. 1)

**Regarding claims 37 and 40.** Kubosawa, Halonen, and Lee teach the limitations of the previous claims.

However, they do not specifically disclose wherein the terminal comprises a screen saver functionality, the state of which is detected, wherein the state of the user interface component is inactive when the screen saver functionality is applied and the state of the user interface component is active when the screen saver functionality is not applied. Kubosawa simply teaches that the user interface component are keys that the user can press, and that the change from inactive to active can be read as the pressing of a key.

McKinnon teaches a method and system of dynamically obtaining the presence of a user based on state information (title and abstract). He teaches in par. 18 that the device monitors the status of a screen saver to determine when the user is present and using the device, or when the user is not present and the device is inactive. He explains that when the screen saver status is inactive, the user is deemed present (i.e. actively using the device), and when the screen saver is active, the user is deemed not present (i.e. not actively using the device). This idea clearly reads on wherein the user interface

component is screen saver (i.e. par. 18, screen saver) and the state of the user interface component is inactive when the screen saver functionality is applied (par. 18, i.e. user not present) and the state of the user interface component is active when the screen saver functionality is not applied (par. 18, i.e. user present).

Therefore it would have been obvious for one of ordinary skill in the art at the time of invention to utilize the teachings of McKinnon with the teachings as in the combination of Kubosawa, Halonen, and Lee. The motivation for doing so would have been to allow for controlling behavior of the communication system based on detecting presence of the user. (McKinnon par. 1)

**Regarding claims 31 and 33.** McKinnon further teaches the state of the screen saver is checked by checking state information from a memory location in par. 18, 34, and 35.

### *Allowable Subject Matter*

10. Claims 32 and 34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### *Conclusion*

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL T. THIER whose telephone number is (571)272-2832. The examiner can normally be reached on Monday thru Friday 7:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on (571) 272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MICHAEL T THIER/
Primary Examiner, Art Unit 2617